IN THE SPECIFICATION

Please replace the paragraphs starting at page 1, line 18, and ending at page 2, line 9, with the following amended paragraphs.

--Commonly used continuous kernels for interpolation are the nearest ~~neighbour~~ neighbor (NN), linear, quadratic, and cubic kernels. The NN kernel is the simplest method of interpolation, which interpolates the image with the pixel value that is spatially nearest to the required one. This method works quite well when the scaling ratio is an integer multiple of the original data as it introduces no new values ([[ie]]i.e., no new ~~colours~~ colors) and preserves sharp edges. However, at other ratios the NN kernel has the disadvantage of shifting edge locations which often produces visible distortions in the output image, especially in images containing text or fine line details. Linear interpolation on the other hand allows for the introduction of new grey levels (or ~~colours~~ colors) that are effectively used to position edges at sub-pixel locations. This has the advantage of reducing the effect of shifted edge locations, however sharp edges can appear to be blurred. Quadratic and cubic interpolation provide steeper step responses and therefore less edge blurring, however, the steeper response results in an overshoot on either side of the edge. These overshoots can make the edges in natural images appear sharper, but on text, fine lines, or on other computer generated graphics these overshoots are clearly visible and detract from the perceived image quality and text legibility.

From the above, it can be concluded that each kernel [[as]] has its own strengths and weaknesses. Further, there are certain image areas which are best interpolated using kernels of different shapes. Simply applying a single continuous convolution kernel at

every image pixel will not satisfy all of the requirements for a general-purpose resolution conversion application.--

Please replace the paragraph starting at page 3, line 22, and ending at page 4, line 2, with the following amended paragraph.

--A method of selecting interpolation kernels based on edge strength, or user input in known. However, there are some defects that prevent this method from working optimally. Firstly, the use of edge strength alone as the basis for kernel selection does not provide sufficient information for reliable kernel selection (especially at oblique edges). Secondly, kernel selection based solely upon user input is impractical and does not specify the kernel selection in enough detail.~~, eg., for~~ For the example, in the sub-image shown in Figure 7(a), there is not one single kernel that is ideal for the whole sub-image. In general, different kernels are required at a resolution that is impractical to be specified by a user.--

Please replace the paragraph at page 9, lines 1-8, with the following amended paragraph.

--The proposed resolution conversion method first identifies high contrast text regions and then measures both edge strength and edge orientation of the image data. In the first embodiment, the text and edge information is then used to select the appropriate interpolation kernel to use. In the second embodiment, the edge strength and the edge orientation data is used

to adjust the parameters of an interpolation kernel. Context information, from the text and edge maps, is then used to remove unnecessary kernel changes and prevent selection of an inappropriate kernel. This post-processing on the raw edge information is required to reduce and remove any interpolation ~~artefacts~~ artifacts.--

Please replace the paragraph at page 13, lines 23-27, with the following amended paragraph.

--The cleaning of the kernel selection map process is explained with reference to Figure 5. There are cases of isolated edge directions occurring in an otherwise uniformly directed local region. These sparsely distributed edge regions are best re-oriented to the underlying uniformly directed edge region or smooth background. This again is to avoid excessive kernel switching which may result in visual ~~artefacts~~ artifacts in the interpolated image.--